

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): A transmitting apparatus that power-amplifies a transmitting signal, the apparatus comprising transmitting power amplifying means having a high-frequency power amplifier, wherein the transmitting power amplifying means has a first mode of operating the high-frequency power amplifier as a nonlinear amplifier and a second mode of operating the high-frequency power amplifier as a linear amplifier, and in the first mode, amplitude modulates the transmitting signal and controls an average output level of the transmitting signal by a power supply voltage of the high-frequency power amplifier and, in the second mode, controls an average output level of the transmitting signal before the high-frequency power amplifier and amplitude modulates the transmitting signal having the average output level controlled; an amplitude modulated signal amplifier for selectively (i) supplying a substantially constant power supply voltage to the high-frequency amplifier in the second mode and (ii) amplifying and supplying an amplified amplitude-modulated signal as the power supply voltage to the high-frequency amplifier operating in the first mode; and a multiplier for generating a multiplied signal to be transmitted to the high-frequency power amplifier by multiplying a phase-modulated signal by an amplitude modulated signal.

Claim 2 (Previously presented): The transmitting apparatus as claimed in claim 1, wherein the multiplier is disposed before the high-frequency power amplifier and a variable gain amplifier is disposed before the multiplier, wherein, in the second mode, the transmitting power amplifying means amplitude modulates the transmitting signal by the multiplier and controls the average output level of the transmitting signal by the variable gain amplifier.

Claim 3 (Previously presented): The transmitting apparatus as claimed in claim 1, wherein an input level of the high-frequency power amplifier is changed according to an average output power of the transmitting signal in the first mode.

Claim 4 (Previously presented): The transmitting apparatus as claimed in claim 1, wherein an input level of the high-frequency power amplifier is changed according to an instantaneous output power of the transmitting signal in the first mode.

Claim 5 (Currently amended): A method of controlling a transmitting power when a transmitting signal is power amplified and outputted by a high-frequency power amplifier, the method comprising the steps of: separating from a base-band modulated signal an amplitude-modulated signal; operating the high-frequency power amplifier as a nonlinear amplifier in a first mode to amplitude modulate the transmitting signal and to control an average output level of the transmitting signal by a power supply voltage of the high-frequency power amplifier, wherein said power supply voltage in the first mode is based at least in part on the amplitude-modulated signal separated from the base-band modulated signal; amplifying the amplitude-modulated signal separated from the base-band modulated signal with an amplitude-modulated signal amplifier to generate an amplified amplitude-modulated signal; supplying the amplified amplitude-modulated signal as the power supply voltage to the high-frequency amplifier operating in the first mode; transmitting from the amplitude-modulated signal amplifier a substantially constant voltage to be delivered as the power supply voltage to the high-frequency amplifier operating in the second mode operating the high-frequency power amplifier as a linear amplifier in a second mode; and before the high-frequency power amplifier, controlling an average output level of the transmitting signal and amplitude modulating the transmitting signal having the average output level controlled.

Claim 6 (Previously presented): A radio communication apparatus for transmitting a transmitting signal from an antenna by radio, wherein the transmitting signal is power amplified by the transmitting apparatus as claimed in claim 1 and is outputted to the antenna.

Claim 7 (Previously presented): The transmitting apparatus as claimed in claim 1 further comprising a low-limit limiting circuit operable in the first mode to establish a minimum value of the amplitude modulated signal to maintain operation of the high-frequency power amplifier as the nonlinear amplifier.

Claim 8 (Currently amended): A transmitting apparatus that power-amplifies a transmitting signal, the apparatus comprising transmitting power amplifying means having a high-frequency power amplifier, wherein the transmitting power amplifying means has a first mode of operating the high-frequency power amplifier as a nonlinear amplifier and a second mode of operating the high-frequency power amplifier as a linear amplifier, and in the first mode, amplitude modulates the transmitting signal and controls an average output level of the transmitting signal by a power supply voltage of the high-frequency power amplifier and, in the second mode, controls an average output level of the transmitting signal before the high-frequency power amplifier and amplitude modulates the transmitting signal having the average output level controlled; an amplitude and phase separator for separating a base-band modulated signal into an amplitude-modulated signal and a phase-modulated signal; and an amplifier for amplifying the amplitude-modulated signal to generate an amplified amplitude-modulated signal, wherein the amplified amplitude-modulated signal is and transmitting an amplified signal to be delivered as supply power to the high-frequency amplifier in the first mode, wherein the amplifier supplies a substantially constant voltage to the high-frequency amplifier in the second mode.